REMARKS

Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claims 1-17 are currently pending in the present application.

Drawings Objection

The Examiner's drawing objection is noted. The Applicant respectfully submits that this objection should be withdrawn. The Examiner asserts that the drawings are not "descriptively labeled." However, each figure is identified with the figure number (*e.g.*, Fig. 1, etc.), and each drawing contains reference numbers identifying the structures in the specification. The Applicant submits that these satisfy the drawing requirements.

If there is something specific that needs to be labeled, the Applicant's representative respectfully requests that the Examiner identify the specific issue. In the Action, the Examiner merely stated that the drawings were not "descriptively labeled." The Applicant's representative has reviewed the drawings and cannot find anything improper in this respect.

Prior Art Rejection

Claims 1-17 stand rejected under § 103(a) as being obvious.

Independent claim 1 stands rejected over four references, namely Ludeke, Tong, Glezeman, and Andrea. The Applicant respectfully requests reconsideration of this rejection because the cited art fails to teach, in the claimed combination:

> the microphone boom being movable between a retracted position and an extended position, the distal end portion being positioned further forwardly towards the mouth of the user when the headset is attached to the user's head in the operative position so as to be closer to the user's mouth in the extended position than in the retracted position;

<p style="text-align:center">*   *   *</p>

> at least one sensor coupled to the circuitry for sensing a position of the microphone boom;

> the circuitry being further operable to apply a gain to the microphone output signal, the gain being varied based on the position of the microphone boom as sensed by the at least one sensor such that the gain is greater when the microphone boom is in the retracted position than when the microphone boom is in the extended position.

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The purpose of these claimed features is to provide a simple and effective way of dealing with background noise. When the boom is in the retracted position further away from the wearer's mouth, a higher gain is applied to the microphone output signal. This higher gain amplifies the wearer's speech, which compensates for the increased distance between the wearer's mouth and the microphone. However, this higher gain also amplifies the background noise. To address this, the boom can be moved to an extended position to position the microphone closer to the wearer's mouth, and in this extended position, a lower gain is applied to the microphone output signal. Because the microphone is closer to the wearer's mouth in the boom's extended position, the lower gain can be used instead of a higher gain to keep the signal component for the wearer's voice at an appropriate level. However, the lower gain results in less background noise, as it is now being amplified less (or not at all). Nothing in the cited art achieves this advantage.

The Examiner relies on Ludeke as teaching the basic construction of a headset with a microphone boom, and on Tong as teaching an extendible and retractable microphone boom. However, neither Ludeke nor Tong teach the above-quoted limitations of a sensor for sensing the position of the microphone, and the circuitry being operable to apply a gain based on the sensed position of the microphone boom as recited.

Instead, the Examiner relies on Glezerman as teaching the "at least one sensor" for sensing the position of the boom. However, Glezerman's sensor has nothing to do with adjusting the gain of the microphone output signal. To the contrary, in Glezerman, the sensor is used to turn the headset on and off. In the raised position, the headset is turned off, and in the lowered position closer to the mouth, it is turned on for use. There is no suggestion that this sensor could be used to adjust gain.

The Examiner also relies on Andrea as allegedly teaching circuitry where the gain is adjusted based on the position of the microphone boom. Specifically, the Examiner cites to Fig. 4 and lines 15-54 of column 7.

The Applicant submits that this analysis of Andrea is incorrect. Andrea teaches a filtering device for removing background noise, and avoiding the need for such a filtering device is what the Applicant's invention achieves. Specifically, in Andrea, two microphones are used — one receiving speech and background noise, and the other receiving primarily background noise. These are provided to a op-amp where the background noises are subtracted or cancelled out, thus filtering the background noise from the speech.

There simply is no teaching in Andrea that its circuitry is operable to apply and vary a gain based on the position of the microphone boom as sensed by the sensor. Indeed, there is no teaching anywhere in the cited art of this novel feature.

At most, the Examiner has identified a sensor in Glezerman and appears to have jumped to the conclusion that one could modify the circuitry of Andrea for adjusting gain based on the boom position sensed by that sensor. However, Glezerman uses its sensor <u>for an entirely different purpose</u>, namely turning the headset on and off based on boom position. Further, Andrea has a filtering system that already cancels out background noise. Simply put, there would be <u>no</u> reason to modify the circuitry of Andrea in view of Glezerman to include these novel features of the claimed invention. This is because Andrea's circuitry already cancels out background noise and including the gain variability of claim 1's circuitry for reducing such background noise would be unnecessary and redundant.

Thus, there is no motivation or suggestion to make the asserted combination and modification of references. Moreover, even if one did combine the sensor in Glezerman with the circuitry of Andrea, the result would be a headset where the sensor in Glezerman turns the circuitry of Andrea on and off. The result would not be the invention of claim 1. There simply is no teaching to modify the circuitry in Andrea to adjust gain as recited in claim 1 based on a sensor sensing the position of the microphone boom.

Accordingly, the Applicant submits that claim 1 is patentable over the cited art, and respectfully requests the Examiner to withdraw the outstanding rejection against claim 1.

Claims 2-16 depend from claim 1 and likewise are submitted to be allowable based on that dependency. Further, claims 2-16 are submitted to be allowable for reciting further patentable features.

Independent claim 17 is a method claim with limitations similar to those discussed above with respect to claim 1, but in terms of a method where the gain is varied based on the sensed position of the boom. Accordingly, the arguments advanced above with respect to claim 1 are submitted to apply equally here to claim 17, and withdrawal of the rejection against claim 17 is respectfully requested.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance, and a Notice to that effect is requested.

If the Examiner has any questions that would facilitate the prosecution of this application, he is invited to contact the undersigned at the below-listed telephone number.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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